

**AMENDMENTS TO THE CLAIMS:**

1. (Canceled)
2. (Canceled)
3. (Canceled)
4. (Canceled)
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6. (Canceled)
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19. (Canceled)
20. (Canceled)

21. (Canceled)
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24. (Canceled)
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31. (Canceled)
32. (Canceled)
33. (Canceled)
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56. (Canceled)

57. (Previously presented) A coal additive comprising;

a plant oil extract selected from the group consisting of hops oil extract, fescue oil extract, barley oil extract, green clover oil extract, wheat oil extract and mixtures thereof;

a carotenoid; and

a thermal stabilizer.

58. (Previously presented) The additive of claim 57 wherein the carotenoid is selected from the group consisting of  $\beta$ -carotene,  $\alpha$ -carotene, lycopene, leutin, betatene and mixtures thereof.
59. (Previously presented) The additive of claim 57, wherein the thermal stabilizer is selected from the group consisting of vegetable oils, nut oils, animal oils and mixtures thereof
60. (Previously presented) The additive of claim 57 wherein the plant oil extract is derived from barley and the carotenoid is  $\beta$ -carotene.
61. (Previously presented) The additive of claim 57 wherein the thermal stabilizer is meadowfoam oil.
62. (Previously presented) The additive of claim 57 further comprising a diluent.
63. (Currently amended) The additive of claim 57 further comprising a solvent selected from the group consisting of toluene, benzene, o-xylene, m-xylene, p-xylene, cyclohexanes, hexane, octanes, nonanes, coal, jet fuel, coal, 2 cycle oil, resid fuel, gasoline, diesel fuel, and mixtures thereof.
64. (Previously presented) The additive of claim 57 further comprising at least one additive selected from the group selected from octane improvers, cetane improvers, detergents, corrosion inhibitors, metal deactivators, ignition accelerators, dispersants, anti-knock additives, anti-run-on additives, anti-pre-ignition additives, anti-misfire additives, anti-wear additives, antioxidants, demulsifiers, carrier fluids, solvents, fuel economy additives, emission reduction additives, lubricity improvers, oxygenates and mixtures thereof.
65. (Canceled)

66. (Previously presented) A coal comprising a base fuel and at least one additive wherein the additive comprises:
- a plant oil extract derived from grain;
  - a carotenoid; and
  - a thermal stabilizer.
67. (Previously presented) The coal of claim 66, wherein the grain is selected from the group consisting of fescue, clover, wheat, barley, oats, rye, sorghum, flax, triticale, rice, corn, spelt, millet, amaranth, buckwheat, quinoa, kamut and teff.
68. (Previously presented) The coal of claim 66 wherein the carotenoid is selected from the group consisting of  $\beta$ -carotene,  $\alpha$ -carotene, lycopene, leutin, betatene and mixtures thereof.
69. (Previously presented) The coal of claim 66, wherein the thermal stabilizer is selected from the group consisting of vegetable oils, nut oils, animal oils and mixtures thereof.
70. (Previously presented) The coal of claim 66 wherein the plant oil extract is derived from barley and the carotenoid is  $\beta$ -carotene.
71. (Previously presented) The coal of claim 66 wherein the thermal stabilizer is meadowfoam oil.
72. (Previously presented) The coal of claim 66 further comprising a diluent.
73. (Currently amended) The coal of claim 66 further comprising a solvent selected from the group consisting of toluene, benzene, o-xylene, m-xylene, p-xylene, cyclohexanes, hexane, octanes, nonanes, coal, jet fuel, coal, 2 cycle oil and resid fuel, gasoline, diesel fuel, and mixtures thereof.

74. (Previously presented) The coal of claim 66 further comprising at least one additive selected from the group selected from octane improvers, cetane improvers, detergents, corrosion inhibitors, metal deactivators, ignition accelerators, dispersants, anti-knock additives, anti-run-on additives, anti-pre-ignition additives, anti-misfire additives, anti-wear additives, antioxidants, demulsifiers, carrier fluids, solvents, fuel economy additives, emission reduction additives, lubricity improvers, oxygenates and mixtures thereof.
75. (Canceled)
76. (Previously presented) A coal comprising a base fuel and at least one additive wherein the additive comprises:
- a hydrophobic plant oil extract;
  - a carotenoid; and
  - a thermal stabilizer selected from the group consisting of peanut oil, cottonseed oil, rape seed oil, macadamia oil, avocado oil, palm oil, palm kernel oil, meadowfoam oil, and mixtures thereof.
77. (Previously presented) The coal of claim 76 wherein the plant oil extract is derived from a member of the Leguminosae family.
78. (Previously presented) The coal of claim 76 wherein the plant oil extract is derived from grain.
79. (Previously presented) The coal of claim 76 further comprising a diluent.
80. (Currently amended) The coal of claim 76 further comprising a solvent selected from the group consisting of toluene, benzene, o-xylene, m-xylene, p-xylene, cyclohexanes, hexane, octanes, nonanes, coal, jet fuel, coal, 2 cycle oil, gasoline, diesel fuel, and resid fuel and mixtures thereof.

81. (Previously presented) The coal of claim 76 further comprising at least one additive selected from the group selected from octane improvers, cetane improvers, detergents, corrosion inhibitors, metal deactivators, ignition accelerators, dispersants, anti-knock additives, anti-run-on additives, anti-pre-ignition additives, anti-misfire additives, anti-wear additives, antioxidants, demulsifiers, carrier fluids, solvents, fuel economy additives, emission reduction additives, lubricity improvers, oxygenates and mixtures thereof.
82. (Previously presented) The coal of claim 76, wherein the carotenoid is selected from the group consisting of  $\beta$ -carotene,  $\alpha$ -carotene, lycopene, leutin, betatene and mixtures thereof.
83. (Previously presented) The coal of claim 76 wherein the plant oil extract is barley oil extract, the carotenoid is  $\beta$ -carotene.
84. (Previously presented) A coal comprising a base feed and at least one additive wherein the additive comprises:
- a plant oil extract selected from the group consisting of hops oil extract, fescue oil extract, barley oil extract, green clover oil extract, wheat oil extract and mixtures thereof;
- a carotenoid; and
- a thermal stabilizer.
85. (Previously presented) The coal of claim 84 wherein the carotenoid is selected from the group consisting of  $\beta$ -carotene,  $\alpha$ -carotene, lycopene, leutin, betatene and mixtures thereof.
86. (Previously presented) The coal of claim 84, wherein the thermal stabilizer is selected from the group consisting of vegetable oils, nut oils, animal oils and mixtures thereof

87. (Previously presented) The coal of claim 84 wherein the plant oil extract is derived from barley and the carotenoid is  $\beta$ -carotene.
88. (Previously presented) The coal of claim 84 wherein the thermal stabilizer is meadowfoam oil.
89. (Previously presented) The coal of claim 84 further comprising a diluent.
90. (Currently amended) The coal of claim 84 further comprising a solvent selected from the group consisting of toluene, benzene, o-xylene, m-xylene, p-xylene, cyclohexanes, hexane, octanes, nonanes, coal, jet fuel, coal, 2 cycle oil and resid fuel, gasoline, diesel fuel, and mixtures thereof.
91. (Previously presented) The coal of claim 90 further comprising at least one additive selected from the group selected from octane improvers, cetane improvers, detergents, corrosion inhibitors, metal deactivators, ignition accelerators, dispersants, anti-knock additives, anti-run-on additives, anti-pre-ignition additives, anti-misfire additives, anti-wear additives, antioxidants, demulsifiers, carrier fluids, solvents, fuel economy additives, emission reduction additives, lubricity improvers, oxygenates and mixtures thereof.
92. (Canceled)
93. (New) A coal additive comprising:  
a plant oil extract derived from barley;  
 $\beta$ -carotene; and  
a thermal stabilizer.
94. (New) The additive of claim 93 wherein the thermal stabilizer is meadowfoam oil.
95. (New) The additive of claim 93 further comprising a diluent.



96. (New) The additive of claim 93 further comprising a solvent selected from the group consisting of toluene, benzene, o-xylene, m-xylene, p-xylene, cyclohexanes, hexane, octanes, nonanes, coal, jet fuel, coal, 2 cycle oil, resid fuel, gasoline, diesel fuel, and mixtures thereof.
97. (New) A coal additive comprising:
- a hydrophobic plant oil extract;
  - a carotenoid;
  - a thermal stabilizer selected from the group consisting of peanut oil, cottonseed oil, rape seed oil, macadamia oil, avocado oil, palm oil, palm kernel oil, meadowfoam oil and mixtures thereof; and
  - a solvent selected from the group consisting of toluene, benzene, o-xylene, m-xylene, p-xylene, cyclohexanes, hexane, octanes, nonanes, coal, jet fuel, coal, 2 cycle oil, resid fuel, gasoline, diesel fuel, and mixtures thereof.
98. (New) The additive of claim 97 wherein the plant oil extract is barley oil extract, and the carotenoid is  $\beta$ -carotene.
99. (New) The additive of claim 97 further comprising meadowfoam oil.